

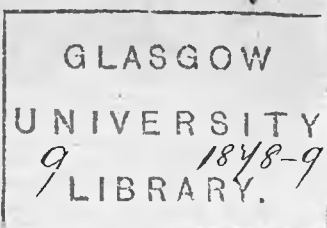
1878-79

Good

Very Good.

Prof.

MB



Thesis

Notes of a few Cases of Chorea, with reference to
the relation of Chorea to Rheumatism and Endocarditis.

— u —

By John Reid M.D. B.C. &c.

— u —

ProQuest Number:27539378

All rights reserved

INFORMATION TO ALL USERS

The quality of this reproduction is dependent upon the quality of the copy submitted.

In the unlikely event that the author did not send a complete manuscript and there are missing pages, these will be noted. Also, if material had to be removed, a note will indicate the deletion.



ProQuest 27539378

Published by ProQuest LLC (2019). Copyright of the Dissertation is held by the Author.

All rights reserved.

This work is protected against unauthorized copying under Title 17, United States Code
Microform Edition © ProQuest LLC.

ProQuest LLC.
789 East Eisenhower Parkway
P.O. Box 1346
Ann Arbor, MI 48106 – 1346

Notes of a few Cases of Chorea with reference to the Relation of Chorea to Rheumatism and Endocarditis.

The term Chorea is applied to convulsive affections, characterized by muscular agitation, more or less disorderly and strange movements and contortions - here as a rule there is no loss of power over a limb, but that power is imperfectly exercised, the will no longer exerting its full control - The remarkable phenomena of this disease, and the intensity with which it occurred in two of my cases, interested me much, and for this reason I have made it the subject of my Thesis -

Chorea then is a Complaint occurring in childhood and puberty, and generally from five to fifteen years of age - its occurrence agrees therefore with that period of development which intervenes between the second dentition and the Completion of the changes that attend on puberty -

It is nevertheless met with, in people of different ages although rarely - Dr. Henry Roger has recorded a case of Chorea occurring in a Lady 83 years of age - but when it occurs in persons of mature age, it is generally due to some internal inflammation as Pericarditis, or Endocarditis or Rheumatism, or some cause which acts and disturbs the whole nervous system - The Majority

always before puberty?

majority of the cases of Chorea affecting individuals after puberty have occurred in women - therefore sex acts in such cases as a predisposing cause; even at the age in which Chorea oftenest occurs, we generally find that girls are more liable to it than boys - all my cases were girls between the ages of five and seventeen - Statistics show that the proportion between girls and boys is as 3 to 1. in the cases occurring still later on in life, this proportion is still higher, and Rousseau says it is only exceptional that Chorea is seen in the male after the age of fifteen, while many cases of the disease in women might be cited.

Hereditary predisposition holds an important part in Chorea as well as in all other nervous diseases; for on enquiry into the family history of my patients, I found that in the ^{most} of them, some of their relatives had suffered from different nervous affections.

Chlorosis may also be cited as a predisposing cause of Chorea, and it is worthy of remark, that in these cases, the Chorea ceases when you get rid of the Chlorosis by the medicines suitable for such cases.

Pregnancy is mentioned by Rousseau as a favourable condition for the production of this nervous complaint, attributing the Chorea to the Chlorosis which so often accompanies

accompanies pregnancy -

Rheumatism is of all the most marked predisposing pathological state - in nearly all of my cases, Rheumatism or Endocarditis was the chief point in their past history - Sometimes the Chorea precedes, and the Rheumatism follows, but I have never met with such a case in my practice.

Deep Emotion or flight is a great determining cause of Chorea, and in the following case, which is the first I will note, was clearly proven to be the chief cause -

Case 1. Mary Oplin, age 5 years - I was sent for on the morning of the 9th August 1875, to see this little girl, who had fallen down stairs - On careful examination I could discover nothing of any moment, with the exception of a little bruising about the forehead; the little patient seemed more frightened and agitated than hurt - I simply prescribed a little soothing mixture, and ordered her to be kept quiet - in a few days after she was quite well, being only a little more irritable than was her usual - On August 29th nearly three weeks from the time of my first visit, I was again sent for - On my arrival I found her suffering from well marked Chorea - Her mother said that.

that ever since the accident the child was never herself, being nearly always irritable and cross when spoken to, liked to be by herself, and took little notice of the other children; she often complained of being tired and wanted rest, but her sleep was only short and much disturbed - About a week before I was sent for they noticed certain movements of her left arm, which gradually became worse, and involved also the left leg, so that she was scarcely able to keep her foot still; and in a few days afterwards the other side was similarly affected, as also her body and face, and it was only when the constant agitation of the whole body became so violent that they sent for me.

In this case both sides and face were much affected, she was unable to grasp any object, or holding it for a moment, or two in her hand dropped it again - her gait was very unsteady and sometimes if not watched she would tumble - Her face was much distorted, and it was only with difficulty she could show her tongue, withdrawing it again almost at once - Her speech was also affected and it was only with great difficulty that she could answer me some questions - It was only after many attempts that she could swallow a little water which

I gave to her. During sleep she was quite still, all the movements and contortions having ceased. She seemed rather dull, and her intellect was much impaired.

Bowel Catarrh. June 1897: Sp. Gr. 1035 rather acid, no trace of albumen. Tongue a little furred. Pulse 84 regular. Had always been a healthy child before the fall, but rather nervous. No history of Rheumatism nor any harmans. Her mother had a sister who was affected with the same Complaint.

The treatment in this case consisted of a purgative of Jalap and Calomel, the Saccharated Carbonate of Iron, 10 Grams every 4 hours, and the Cold bath. This was steadily persevered in, and although for some time little improvement ensued, still at the end of five weeks she was so much better, that I sent her away for a change of air. On her return she looked quite strong and robust for a child of her years. Ever since she has enjoyed good health.

In this case the fright, caused by the fall down stairs was the exciting Cause of the Cholera, without any doubt, but the hereditary predisposition, as proved by the child's Aunt having suffered from the same affection when young, and others of the family being hysterical, certainly was the Great factor in causing the

the Chorea to be developed from the fright - This is a good case of simple Chorea, all the symptoms common to the disease being well marked and pretty violent. I noted this case particularly in order to show that fright, or a sudden shock can produce Chorea - at the same time I am convinced that fright alone will seldom cause it; that there requires to be over and above the sudden shock, either hereditary predisposition, or some previously impaired state of the health. The treatment here was simple, and the cure was complete in a remarkably short time. This I attribute not so much to the remedies employed, as to the previously good state of health the child was in at the time of the fall.

Case II. Agnes Stewart aged 9. Was sent for to see this girl, who was said to be suffering from St. Vitus's dance. The attack had commenced without any apparent cause - she never had Rheumatism but had suffered from Scallatina when four years of age. On auscultation was heard a distinct murmur especially at the base of the heart. Pulse 88 very weak Tongue furred. Bowels active. Urine sp. gr. 1022 and acid. The family history elicited nothing indicative of fits, or any

any nervous affection whatever, but father died of Consumption two years ago - The present illness consisted in severe convulsive movements more marked however on left side of the body - At first the convulsions were entirely confined to the left side, and only came on at times, but afterwards the whole body was affected, and the convulsions became more severe - So great was the muscular agitation that the head and left side of the body, were drawn sometimes to one side, and sometimes to another, and at one of my visits, I found her in a state approaching to Opisthotonos - Here although the movements were so violent, the patient could talk tolerably well, and show me her tongue without very much difficulty -

The treatment in this case consisted first of the Compound powder of Opium, with Calomel, Strychnine in small doses, and the use of the cold bath every morning - After the movements ^{became} less severe I put her upon Iron and Strychnine, and she gradually improved every day - At the end of six weeks, dating from the commencement of the Chorea, all the violent movements had ceased, but she was unable to move her left arm and leg - in fact she had all the symptoms of left Hemiplegia, being now quite helpless, could not walk and

and was scarcely able to talk. I still continued the iron and strychnine mixture, purgatives, and the cold bath, ordering her also Cod liver oil, wine, beef-tea and plenty nourishing support, along with exercise of the limbs and in about a fortnight afterwards she was nearly well. This case shows pretty well that remarkable phenomenon of Chorea, namely palsy. Here the motor power is greatly enfeebled in the affected parts; the violence of the movements, by exhausting the muscular power will no doubt cause this, but cases occur sometimes in which the loss of power is from the first quite out of proportion to the amount of muscular movement. Rousseau says that the paralysis is a part of the convulsions and is most marked in the parts where the latter most prevails. Thus the limbs which are the most affected with choreic movements are the ones which are the seat of the paralysis; the arm for instance which is the most convulsed, is the one also in which muscular strength is most diminished; the child often complains that this arm is heavier than the other. The leg which is most convulsed is also the one which bears the weight of the body least, and which is dragged the most when the child walks. The paralysis in my case was chiefly confined

confined to the left side, and here I may remark the choreic convulsions were first observed on the left side, and from first to last was most violent on this side. Rousseau remarks that this coexistence of a greater degree of convulsive agitation, and of a diminution of muscular strength is all the more inexplicable, that the paralysis is as knovle as the choreic affection with which it is connected - thus when the chorea is more marked in one half of the body, the paralysis is also marked on that side; but if the convulsions become more violent on the opposite side, that side will in its turn be paralyzed - Sometimes he says the paralysis may precede the chorea".

Such cases as the above are not of extreme rarity, often they are less severe, but sometimes more so - the power is scarcely ever permanently lost, though sometimes long in being regained - The same may be said about the impairment of the intellect and to the loss of power of speech, which are symptoms sometimes met with in choreic patients - both are but temporary states and after a time (which varies in different cases) get right again.

The remaining cases I have to mention agree somewhat in

in all having a history of Rheumatism or of Endocarditis.

Case III. Sarah Boston aged 17. In December 1876 I attended this patient for acute Rheumatism, which lasted for weeks - she had it pretty severe, all her joints being affected, and fever very high; temperature 102° ; pulse 130.

Under the usual treatment, Bicarbonate of Potash, Dover's powder and blisters she got well at the end of five weeks. I ordered her away for a change of air, and for some time seemed to be progressing well, but a few days before her return home, slight agitation of the left arm and leg was observed, which gradually got worse, and involved the whole body - owing to this she was brought home otherwise she would have remained a little longer - the time that elapsed from getting ^{out} of bed after the attack of Rheumatism, until the convulsive movements set in, was exactly five weeks - It was during her convalescence then, that the choreic movements set in, and from first seeing her, the relation between Rheumatism and Chorea strikes me very much -

The attack of Chorea which she suffered from was quite as violent as the Rheumatism was acute - her whole body was in a complete move, the convulsions seemed to be constant - for days she was unable to feed herself or to walk and therefore had to be confined to bed the

the most of the time - It was only occasionally I could get her on any account to show me her tongue, which was much coated and dry; her face was greatly contorted, and often she would cry so loud as to alarm the neighbours - Bowels were constipated, and it was only with medicine that she could get them moved at all - Pulse 100 rather irregular. A blowing murmur was heard quite distinctly at the apex of heart - this murmur was first detected during her Convalescence from the Rheumatism - This was as severe a case of Chorea as I ever witnessed, and from the length of time she was ill and my seeing her every day, impressed it so thoroughly on my mind that I never forgot it -

The treatment in this case consisted in Vin and Aseric, good purgatives, and the cold bath every morning, so soon as she was able to have it, as the convulsive movements lessened, and she could swallow a little better, I gave her plenty of nourishing broths, wine and Cod liver oil - Such was very necessary in this case, as she had become very weak and emaciated from want, during the period, the movements were so violent - She was also quite worn out from want of sleep, as the Chorea movements continued often at night

as well as day, notwithstanding the opiates I prescribed at bed-time - and it was only under the influence of the subcutaneous injection of morphia in strong doses, that sleep could be procured at all.

Case IV. Jane Moore age 15 years - was sent for to see this patient in June of last year, who was suffering from Convulsive movements affecting almost the whole of the body - On enquiry I found that she suffered from Scarlatina when a child, and on examination of her chest, discovered a blowing murmur, indicative of Endocarditis - Her present illness commenced a few days before my visit, with the usual precursory symptoms which gradually got so violent as to alarm her parents - she was perfectly sensible so long as I was speaking to her, but her mother said that at times she was rather unconscious, being then very pale, and making a great noise in breathing - the movements began on the left side, and afterwards involved the right side and face; at first she could not pronounce her words distinctly, and often would remain silent for some time; she looks quite frightened at times, especially when any stranger is present, and her brother asserts that she seems best when alone - her gait is peculiar, consisting chiefly in a

a dragging of the left leg, never offering to lift it from the ground, and it is only after many efforts that she will attempt to walk at all - she can feed herself, but seems to have no appetite for her meals and would rather do without them, if she had her own way - Bowels Constipated - Urine often passed in bed, Pulse 130 and very irregular - Examination of the lungs revealed nothing abnormal, and in every other respect the patient seemed healthy. Family history good - The treatment here consisted in first, free purgation with Pulv: S alop: C and Calmel, the administration of Arsenic for over three weeks, and the regular use of the Cold bath - this patient had great repugnance to the bath, but by being firm, they got her to have it regularly - Then I combined the Arsenic with iron as the patient was very weak, and ordered her plenty of light food, beef tea, wine and beer - this treatment was constantly continued for other four weeks, when patient was so far well, as to be considered Convalescing.

This case was rather interesting to me, as it occurred in a young healthy girl without any apparent cause; but with the history of Sclerotina and the Cardiac Murmur indicative of Endocarditis.

Case

Case V. Elizabeth Bainbridge age 14 years. Had Rheumatism two years ago. Family history good, none of her parent or friends having suffered from any serious Neurosis or Phthisis. Pulse 80 & regular. Tongue rather furred. Appetite indifferent, but patient has great difficulty in feeding herself, owing to the convulsive agitation. Bowels constive. Urine pale, acid in reaction. No albumen. She has never menstruated. Examination of the heart detected a systolic murmur, audible at the apex. Her present illness commenced a few days before my first visit which was on the 3rd August 1877, with slight convulsive movements of the right side of the body, which gradually became worse, and afterwards affected the left side - (this is the only case I have had, where the choreic movements began on the right side; according to some authors this is not at all uncommon, but from the cases I have had, I am forced to the belief, that the precursory symptoms set in more frequently on the left side) - her limbs, trunk and eyes were continually on the move; her ideas were confused, and was rather given to talk although her speech was much affected - she had much difficulty in feeding herself, and even in chewing the food she did take. her tongue was also affected, as she had great difficulty in protruding it; her gait was unsteady, and only occasionally would she attempt to walk at all, and this was when she

she complained of numbness in her limbs - the sensibility of the affected parts was impaired in a well marked degree.

The treatment of this case, was quite the same as the last one, namely free purgation by means of Salap and Calomel, and the administration of arsenic, along with the cold bath - this was persevered in for over a month but as little benefit ensued, I stopped the arsenic and put her upon Strychnine in very small doses, a liberal diet, wine and Cod liver oil - in three weeks she got so far well, that I sent her away for change of air, which strengthened her much, and she returned quite strong, and apparently in good health.

The occurrence of the three last cases all having a Rheumatic history or evidences of Endocarditis, caused me to study particularly the relation of Rheumatism to Chorea; and so far as my observations go, I must admit the idea, that Rheumatism does play an important part in the causation of Chorea, although at the same time I acknowledge that at present, the pathology of Chorea is very mysterious, and that it is almost hopeless to look for any theory, which will afford at once an intelligible explanation of the varied conditions under which it arises, and its very remarkable characteristics.

"Broussais says that of all predisposing pathological causes

causes, that whose action is most marked and unquestionable is the vice Rheumatismal" - He estimates the proportion of cases in which Rheumatism is followed by Chorea as one-third of the whole, reckoning as evidences of Rheumatism any traces of by-past Endocarditis, as well as the usual articular disorders, for he says if you do not find articular Rheumatism in a pretty large number of Choreic patients, you will find the signs of old Endocarditis, a manifestation of Rheumatism, which spared the joints, but existed nevertheless, and affected the organism deeply" - He has been able in many cases to foretell that children suffering from Rheumatism, would become affected with Chorea; and on the other hand has been able to predict that Choreic children would sooner or later have Rheumatism - yet he says you rarely see it precede Rheumatism" - No doubt there is a great deal in what Rousseau says, and I am, rather of the belief that Rheumatism occurs in children more frequently than is supposed - Some argue that if Rheumatism had any thing to do with the causation of Chorea, it would be a disease common to adults, as Rheumatism is very common among grown up people, whereas it is not; the period of its development being most common between the ages of 5 and 17 years - but in answer to this I would say that the nervous system in adults, recovering from Rheumatism is less impressible, and what would produce Chorea in the young, would give rise to some

Some other disorder in the adult, perhaps of a more formidable nature - Chorea though is sometimes seen in the young, and here I would say that it occurs in those of an excitable temperament, or whose nervous system is weakened more or less. Again another condition which may give rise to Rheumatism in the young, independent of the causes which produce it in adults, is Scarlatina - in one of my cases there was the distinct history of Scarlatina, and although there had never been any Rheumatism, so far as I could discover, still it may have existed unperceived, as the Rheumatism in such cases, does not give rise to the general symptoms which usually characterize it, as the patients little complain of it, and is therefore overlooked - in my case there was heard a very distinct Cardiac murmur. Thus Trousseau says is explained the production of Endocarditis and Pericarditis, which manifest themselves when Scarlatina is declining; pericarditis though more rarely than Endocarditis. Dr. Hughes was the first who drew attention to the existence of a distinct relation between Rheumatism and Chorea, but it was A. Lee who first discovered how close this relationship was - of 109 cases of Rheumatism, he says 61 were complicated with Chorea. M. Rogers regards Chorea and the heart affection, with which it is frequently associated, as but another manifestation of Rheumatism: he believes that Rheumatism does more than

than predispose to, that it actually produces it, that indeed it is the Common Cause of Chorea, which is a Rheumatic Symptom, just as much as the pains in the limbs or the Swelling of the joints, or the inflammation of the Endocardium.

From the intimate relation between Rheumatism and Chorea which I observed in my cases, I rather incline to the view that Embolism connected with Rheumatic Endocarditis is the most frequent casual condition - in all my cases the Endocarditis preceded the Chorea, but it is recorded that sometimes the Chorea precedes the heart affection. It is from this concurrence of Rheumatism and Endocarditis with Chorea, that the theory of Embolism has arisen - It was Dr. Stokes who first propounded the hypothesis of Embolism, as explained by the irritation of the nerve centres, from detached fine molecules of fibrin, the production of this disorder.

Dr. Hughlings Jackson goes further and says that the plugging of the minute vessels of the convolutions near the Corpus Striatum is the Cause of Chorea, the tissues not being absolutely destroyed as in hemiplegia, but undernourished owing to a deficient supply of blood. Dr. Kitzes affirms that sometimes such cases happen in individuals belonging to a Rheumatic family, and in whom therefore the Rheumatic diathesis may be assumed to be in some degree operative, although the patient himself may not have suffered from

from Rheumatism - often he says cases occur where no evidence of a Rheumatic tendency can be detected, to account for the Cardiac disease, nor any proof of the existence of any other ailment likely to explain the Chorea, and in such cases as these one is forced to associate the Chorea with the Endocarditis independent of Rheumatism. He considers that the irritation leading to the development of the Chorea or other analogous phenomena may be accounted for partly by the mere circulation of morbid blood through the nervous centres, partly also by temporary obstruction of the minute Capillaries occasioned by fibrinous particles arrested therein. This theory of Dr. Huxley is held by a great number of good authorities, as explaining the Cause of Chorea, but as it rests chiefly on the results of microscopic examinations, and as I have never seen a post mortem examination of such a case, I can say very little regarding it from my own experience - however from the few cases I have met with in practice, having the history of Rheumatism or Endocarditis at some time or other, and from the experiences of Rossouw, Hughes, Botel, Lee and others, I think there can be no doubt of the relationship between Rheumatism and Chorea, and as Endocarditis is found in a large number of the cases, the theory of Dr.



Dr. Kirkes seems very justifiable.

Dr. Broadbent at the Royal Medical and Chirurgical Society held in October 12th 1875, mentioned a fatal case of Rheumatic Chorea with delirium in which there was plugging of minute vessels of the brain with decolorized clots. Dr. Hughlings Jackson at the same meeting said that he had found Emboli in the small arteries in two cases at least, and pointed out the great frequency with which Chorea is associated with Rheumatism and Endocarditis as favouring the view of Embolism - Chorea in adults was frequently met with in pregnancy, a condition favourable to thrombosis.

Dr. Bastian also found plugging of small arteries (which he attributes to thrombosis) in the Corpus Striatum in three cases - still he thinks the pathology of Chorea is as yet an open question - but in favour of Embolism he says it is the very process which would cause that unstable or excitable condition of the nervous system present in the disease - in Chorea the seat of the lesion is probably in the Corpus Striatum, the chosen spot for Embolism.

Many object to the Embolic theory and hold a different view altogether - the clinical objection raised by Ince and Anstie, that left hemichorea was more frequent than the right, was not a serious one, since other observers had reversed this relative frequency - the prompt recovery from Chorea

Chorea has been advanced as against the embolic view, but did not patients with severe hemiplegia depending on wide spread lesion in the brain often recover promptly and almost completely -

"Dr. Dickinson regards Chorea as depending upon a widely spread hyperaemia of the nervous centres, not due to any mechanical interference, but produced by causes mainly of two kinds, one being the Rheumatic condition; the other comprising various forms of irritation - mental and reflex - belonging especially to the nervous system - The embolic theory is regarded by him as inconsistent with the character and distribution of the morbid appearances, in that in no instance were decolorized plugs found in the arteries of the seven fatal cases examined by him, and also that the symmetrical distribution of the changes found in his cases was strongly opposed to embolism - The morbid appearances of his fatal cases are described as follows: - the first visible change was injection or distension of the arteries, this being succeeded by extrusion of their contents, to the irritation or injury of the surrounding tissues - the changes affected both brain and Cord, the Cord perhaps the most severely - whether in Brain or Cord, the changes on the two sides were generally symmetrical, both being often affected at the same spot,

in

in the same manner, and nearly to the same extent, and in instances where no symmetry was apparent, a tendency to it could be traced, as in the existence of vascular distension on one side, corresponding to haemorrhage on the other. The parts of the Brain most usually affected lay between the base and the floor of the lateral ventricles, in the tract of the middle cerebral arteries, the substantia perforata, the corpora striata, and the beginning of the Sylvian fissures. In the cord the changes attained their maximum in the posterior and lateral parts of the grey matter, and in the upper portions of the cord.

Notwithstanding the above description of the morbid appearances detailed by Dr. Dickinson & Hughlings Jackson still holds the embolic theory, and is of opinion that none of the pathological facts adduced by Dickinson are really inconsistent with the embolic explanation.

Dr. West's opinion is, that we are not in a position to establish from pathological observation alone, the nature of a disease in which the mortality is so small as 1 per Cent. - this undoubtedly is quite correct, for the pathology of Chorea is still undecided; but as nearly all the fatal cases have shown evidences of Endocarditis, and in some, emboli in the small arteries have even been discovered, and knowing that Endocarditis can exist without

without a murmur, I am inclined at present to adhere to the theory advanced by Dr. Keble and strongly supported by Dr. Hughlings Jackson -

In conclusion I have only a few remarks to make on the treatment of Chorea - in all of my cases a uniform plan of treatment was adopted, which consisted in free purgation, arsenic or strychnine with Iron internally, along with the use of the Cold bath -

In almost all cases of Chorea we find habitual Constipation, therefore my first indication of treatment was directed to overcome this - for this purpose I generally use Calomel and Jalap, which is a stimulant of Cathartic, and one which seems to answer very well in such cases. I always look upon the employment of such a purgative as one of the chief points in the treatment of Chorea -

Cases are on record where a Cure has taken place from a course of purgative medicines, and in some cases even where the general state seemed to contra-indicate it. It is also worthy of note that the appearance of the faeces is sometimes healthy at first, then becomes unnatural "black and foetid" and subsequently healthy again. No doubt such medicines as purgatives do good by removing the intestinal secretions, and stimulating the intestinal follicles and

and Glands -

Of all the drugs which are supposed to exert any specific power over Chorea, Arsenic is the one which I have employed most freely; and from the satisfactory results which I obtained, I consider it as useful a drug as any of the list of remedies recommended in such cases. Arsenic has been employed in the treatment of Chorea for a long time now, and very successfully too by Drs. Begbie, Radcliffe, and other physicians of very high authority. It no doubt has a considerable effect in stilling the facilitations of Chorea. Arsenic is evidently a nervous tonic, acting on both departments of the nervous system, increasing their vital power, and enabling ^{them} to resist noxious influences. Its curative action in Chorea may be explained, by strengthening the cerebral - spinal centres which are weak unduly excitable and mobile.

Musseau says that Arsenic is given in Chorea from its possessing the property of causing general excitation, and especially increased vigour of the lower extremities -

Dr. Rayer has given it in old and obstinate cases which had resisted the usual methods of treatment and has been able to improve and even to cure them completely -

strychnine is a drug which I have used occasionally, in cases where sensation was impaired, or where paralysis existed

existed, and in such cases it acted very well.

strychnine is the drug generally used by Serravallo, and he speaks very highly of it indeed - in his Clinical lectures he lays down precise rules for its administration noting that if the physiological effects of the drug show themselves the doses should not be increased. Strychnine like all preparations of Dux Vomica belongs to that class of remedies which by virtue of a special therapeutic influence, and a very remarkable cumulative action are apt to give rise to perfectly unforeseen accidents. It is also important that it should be remembered that it is variably tolerated by different individuals, and by the same individuals at different times - The variability in the degree of power of the drug, renders its administration a delicate matter, and demands the most scrupulous care; and on this account perhaps this method of treatment will not obtain the importance which Serravallo says its unquestionable advantages ought to give it. Strychnine is undoubtedly a nerve tonic, and like arsenic will act on the Cerebro-spinal system.

Iron is a nerve tonic from which good results are obtained. I employed in all my cases in combination with either arsenic or strychnine, and to its action



X. Difference wanted here

action I always attached great importance. It is a decidedly good tonic, and as nearly all cases of Chorea are accompanied or preceded by Chlorosis, or marked debility from the convulsive movements, I generally give it at the commencement of the illness, or during Convalescence. The Saccharated Carbonate is about the most useful preparation of iron, and easily digested by the stomach. The investigations of Pokrowsky show the chief effect of iron to be transferred to improved nutrition, the animal temperature then of raised, the urea secretion augmented, and the weight of the body increased.

The cold bath was part of the treatment adopted in all my cases, believing that its action was very beneficial and assisted the cure in many of the cases.

It acts as a tonic, increasing nervous power, and specially exciting the smooth muscular fibres of arteries and of the skin as well as the nerves influencing them. It has been recommended by a great many authorities. J. M. S. says that it acts both through the sedative and tonic properties of Cold and through the momentary perturbation of the nervous system which it occasions. It moderates the intensity of the disease, even though it does not arrest it, or sensibly shorten its duration, and from its favorable influence



on the whole system, it places the patient in a good condition for going through the attacks. In some cases however the patient is very reticent in having the baths, and when such is the case in timid and sensitive persons, I think they should not be persevered in, for they are then likely to do harm instead of good. Where Rheumatism is threatened, they should not be recommended at all.

Sulphur baths have been proposed by Baudelocque, and according to many writers answer very well. I have never yet used them, but have no doubt that in some cases they would do great good.

Other remedies have been employed in the treatment of Chorea, but as I have had no experience in their employment I shall only enumerate them shortly.

St. West speaks highly of the Sulphate of Zinc given in increasing doses, continuing the remedy at whatever dose fairly controlled the movements; and if it produced sickness, he continued a smaller dose until the movements were controlled, or until he had become satisfied of its inutility.

Tartar Emetic in large doses, has been employed in the treatment of Chorea by St. Gillette and others, with good results. If in cases, all other modes of treatment fail

fail, the employment of this drug would be very advisable. Gymnastic exercise seems to hold an important rank, among the various methods of treatment of chorea; and in many cases no doubt has some advantages.

It would seem as if, in this method of treatment, a change will be replaced, after a time, the patients will which was unable to coordinate the movements which itself commanded. But it is only towards the close of the disease, that such treatment can be employed, so that it is only as Rousseau says, accessory in the treatment of St. Vitus's dance.

Electricity has been used in the treatment of Chorea by Dr. Hien, but it is now abandoned.

Irradiation of the skin has been advocated by some, but any good results from its use are still wanting.

Antispasmodics and Narcotics have been much used in the treatment of Chorea, such as Valerian, Camphor, Assafoetida, Opium, &c. but all have failed.

Cannabis indica may in some cases prove an additional resource in very obstinate cases, and whenever Narcotics are indicated with the view of preventing certain dangerous complications. Bromide of Potassium with Chloral has been used by some with apparent good results.

Where



Where there is obstinate want of sleep from the extreme agitation depending upon some remote irritation, Chloroform inhalations may do good - Opium also has its advantages and in some cases when a small dose fails, it can be increased until the patient is taking an enormous quantity - the possibility of opium depressing dangerously the action of the heart must not be forgotten, therefore alcoholic drinks should be freely given - I have used Opium in several of my cases in order to procure sleep, and found it very useful, and in one case where it failed to reduce the agitation I found a subcutaneous injection of morphia to act admirably.

It must not be forgotten however that Chorea sometimes has a tendency to a spontaneous recovery - Many examples of such have been recorded - Dr. Guy and Jacksonell have recorded a series of cases of Chorea in the treatment of which all medicines had been withheld, and reliance had been placed solely on nursing and good diet.

The average duration of Chorea, treated on this expectant plan, was shown by them to be little over 9 weeks - a result quite as satisfactory, as from any other mode of treatment.

Hygienic measures in the treatment of Chorea call for some attention - Nutrition and tonic food given at



at regular intervals, and in small quantities should be preserved in, and stimulants should also be given as the disease is one of great exhaustion - Open air exercise, and when patient is so far well a change of air does great good. In cases at all violent care must be taken that the patient does not hurt himself in his disordered movements -

— " —